

**CLAIMS:**

1. A cryptographic method of enabling a consumer to obtain a document from an owner upon a payment, the method comprising the use of a protocol involving the consumer, the owner and a document source, wherein the source requires knowledge of a key in which a said document is encrypted in order to provide the said document, the protocol comprising the following sequential steps:
  - (a) the consumer requests a specified document;
  - (b) the owner provides the source with a first portion of the key;
  - (c) the consumer provides the owner with the payment; and
  - (d) the owner provides the source with a second portion of the key, which can combine with said first portion to generate the complete key.
2. A cryptographic method of enabling a consumer to obtain a document from an owner upon a payment, the method comprising the use of a protocol involving the consumer, the owner, a document source and a mediator, wherein the source requires knowledge of a key in which a said document is encrypted in order to provide the said document, the protocol comprising the following sequential steps:
  - (a) the consumer requests a specified document;
  - (b) the owner provides the source with first and third portions of the key and provides the mediator with a fourth portion of the key, which can combine with said third portion to generate the complete key;
  - (c) the consumer provides the owner with the payment; and
  - (d) the owner provides the source with a second portion of the key, which can combine with said first portion to generate the complete key.
3. A cryptographic method as claimed in Claim 2, wherein said first and said third portions of the key are different.

4. A cryptographic method as claimed in Claim 2 or Claim 3, and arranged for enabling a said consumer to receive a plurality of such documents, wherein said first and second portions are different for each document.
- 5 5. A cryptographic method as claimed in any one of Claims 2 to 4, wherein the mediator is involved in the protocol only in the event of a dispute between the owner and the consumer.
- 10 6. A cryptographic method as claimed in any preceding claim, wherein the document source comprises a printer.
- 15 7. A document source for use in a method as claimed in any preceding claim, the source comprising a memory for storing a said first key portion, means for receiving a said second key portion and means for decrypting an encrypted document transmitted thereto in accordance with the encryption key defined by said first and said second key portions.
- 20 8. A document source comprising a memory for storing a first cryptographic key portion, means for receiving a second cryptographic key portion and means for decrypting an encrypted document transmitted thereto in accordance with the encryption key defined by said first and said second key portions.
- 25 9. A document source as claimed in Claim 7 or Claim 8 comprising a printer.
10. A document source as claimed in Claim 9, arranged to print a number of copies of a said document in each of a plurality of formats.
11. A document source as claimed in Claim 10, arranged to print only one copy of a said document in a first format and an unlimited number of copies of said document in a second format.
- 30 12. A document source as claimed in Claim 10 or Claim 11, wherein said formats comprise different resolutions.

13. A document source as claimed in any one of Claims 10 to 12, wherein said formats comprise monochrome and colour images.
- 5 14. A fair exchange method of enabling a consumer to obtain a document from an owner upon a payment, the method comprising the use of a protocol involving the consumer, the owner and a printer, wherein the owner transfers a document to the printer and the consumer transfers a payment to the owner, the printer interacting with the owner and the consumer to ensure that the consumer receives the document only when the payment has been made.
- 10 15. A cryptographic method of enabling a first party to obtain an item of value from a second party upon receipt by said second party of a second item of value, the method comprising the use of a protocol involving the first party, the second party and a source of said first item of value, wherein the source requires knowledge of a key in order to provide the said first item of value, the protocol comprising the following sequential steps:
- 15 (a) the first party requests a specified first item of value;
- (b) the second party provides the source with a first portion of the key;
- 20 (c) the first party provides the second party with the second item of value; and
- (d) the second party provides the source with a second portion of the key, which can combine with said first portion to generate the complete key.
- 25 16. A fair exchange method of enabling a contract between a buyer and a seller of a commodity comprising the use of a cryptographic protocol involving the buyer, the seller and a source of said commodity, the source interacting with the buyer and the seller to ensure that the buyer receives the commodity only when a payment has been made by the buyer to the seller.